

What is claimed is:

1. An embolic protection device, comprising:
  - an elongate shaft having a proximal end and a distal end;
  - a magnetically permeable section disposed proximate the proximal end of the shaft; and
  - an embolic protection filter disposed on the elongate shaft.
2. A device in accordance with claim 1, further comprising of plurality spaced apart magnetically permeable sections disposed proximate the proximal end of the shaft.
3. A device in accordance with claim 2, further comprising of plurality of non-magnetically permeable spacers disposed between the magnetically permeable sections.
4. A device in accordance with claim 2, further comprising a captivation tool including a plurality of spaced apart magnetic sections magnetically couplable to the magnetically permeable sections.
5. A device in accordance with claim 1, further comprising a captivation tool including a magnetic section magnetically couplable to the magnetically permeable section.

6. A device in accordance with claim 5, further comprising a sheath being disposed between the magnetically permeable section and the magnetic section.
7. A device in accordance with claim 1, further comprising a delivery sheath disposed at least in part about the shaft.
8. A device in accordance with claim 1, wherein the shaft comprises a wire.
9. A device in accordance with claim 8, wherein the shaft comprises a NiTi alloy.
10. A device in accordance with claim 1, wherein the filter includes a frame including nickel titanium alloy.
11. A device in accordance with claim 1, wherein the filter is fixed to the elongate shaft.
12. The method of placing an embolic protection device in a vessel, comprising:
  - providing an elongate shaft having a proximal end and a distal end, an embolic protection filter disposed on the shaft and a magnetically permeable section disposed on the shaft;
  - providing a captivation tool including a magnetic section;

advancing the elongate shaft to a target site in the vessel; and  
magnetically coupling the magnetically permeable section to the magnetic  
section.

13. A method in accordance with claim 12, further comprising advancing the  
shaft and the filter to the target site simultaneously.

14. A method in accordance with claim 12, further comprising providing a  
plurality of spaced apart magnetically permeable sections disposed proximate the  
proximal end of the shaft.

15. A method in accordance with claim 14, further comprising disposing a  
plurality of non-magnetically permeable spacers between the magnetically  
permeable sections.

16. A method in accordance with claim 14, further comprising providing the  
captivation tool with a plurality of spaced apart magnetic sections magnetically  
couplable to the magnetically permeable sections.

17. A method in accordance with claim 12, further comprising providing the  
captivation tool with a magnetic section magnetically couplable to the  
magnetically permeable section.

18. A method in accordance with claim 12, further comprising disposing a sheath between the magnetically permeable section and the magnetic section.
19. A method in accordance with claim 12, further comprising disposing a delivery sheath at least in part about the shaft.
20. A method in accordance with claim 12, wherein the shaft comprises a wire.
21. A method in accordance with claim 20, wherein the shaft comprises a NiTi alloy.
22. A method in accordance with claim 12, wherein the filter includes a frame including a nickel titanium alloy.
23. A method in accordance with claim 12, further comprising fixing the filter to the elongate shaft.
24. A method in accordance with claim 12, further comprising the step of advancing a therapeutic catheter along the elongate shaft to the target site.

25. A method in accordance with claim 24, further comprising withdrawing the therapeutic catheter from the elongate shaft and advancing a retrieval sheath over the shaft to retrieve the filter.

26. A method in accordance with claim 25, further comprising withdrawing the elongate shaft and retrieval sheath from the vessel.